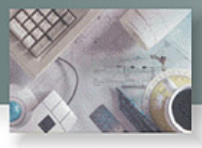

Technology Area

DEFINITION	
Name	Geographic Information System (GIS)
Description	GIS – A software system for collecting and managing information about the state's natural and man-made resources and geographically referencing their location on the earth. Non-location based attributes can then be linked, creating a spatial database. An example would be a road network. The location of the road is the spatial data; the road type, condition, and usage are the attributes. Combining these two data types enables GIS to be an effective problem-solving tool. GIS is also used for: • analyzing resource relationships, • forecasting and planning via modeling tools, • visualizing relationships in a graphical format, • integrating data within the enterprise
Rationale	GIS is the core technology within the Geographic Information Technology (GIT) discipline. It is capable of integrating all of the GIT Technology Areas (GPS, Remote Sensing, Geospatial Data, etc.) into a spatially integrated information system and provides the analysis tools for decision-making. It enables visualization and modeling of data for unique analyses that statistical programs and database queries cannot provide.
Benefits	Government agencies and other organizations are frequently asked for quick responses to natural disaster, industrial accidents, environmental crises, and homeland security alerts. Much of the information needed to make sound decisions are based on geography. GIS facilitates this analysis and is playing an ever-increasing role in decision making at all levels of government and private industry. The benefits are that it: • Provides the ability to share and integrate data across organizations and investigate relationships, bringing added value to existing governmental resources. • Accurate cataloging and mapping of governmental resources' locations and conditions increases management efficiency. • Provides capabilities to visualize relationships between features and events to enable faster and more informed decisions by governments. • Develop "what-if" scenarios to model current events and prepare for possible future occurrences to help governments provide timely and accurate responses to the citizen.

ASSOCIATED ARCHITECTURE LEVELS	
Specify the Domain Name	Information
Specify the Discipline Name	Geographic Information Technology (GIT)

KEYWORDS	
List Keywords	Geographic Information System, GIS, Mapping, Spatial Analysis, Visualization, Modeling, Geospatial, Land Resources Information

	System, Spatial Data Management System, Planning Information System, Resource Information System, Geo-Information System, Spatial Information System, SIS, Multipurpose Cadastre, Land Information System, LIS, Automated Mapping and Facilities Management, AM/FM		
ASSOCIATED COMPLIANCE COMPONENTS			
List the Compliance Component Names			
ASSOCIATED PRODUCT COMPONENTS			
List the Product Component Names			
CURRENT STATUS			
Provide the Current Status	☐ *In Development* ☐ *Under Review* ☒ *Approved* ☐ *Rejected*		
AUDIT TRAIL			
Creation Date	06/27/2003	*Date Approved / Rejected*	10/14/2003
Reason for Rejection			
Last Date Reviewed		*Last Date Updated*	
Reason for Update			